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# An Essay

on

# Angina Suffocativa

by

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Mr Bobo examined on the 14th March 1823 and the Professors not being satisfied he was permitted to come again before the faculty after the examinations were generally over

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## Angina Suffocativa or Croup.

Of all the diseases of children, Croup deserves our most particular attention, both on account of the fatality of its disposition and the obscurity in which its causes and real nature are involved. We consult medical history in vain for a satisfactory description of its different varieties, and probably many years will yet elapse before our profession can become familiar with all the forms of combination in which its symptoms are capable of being associated.

The various names by which authors have designated it, offer the most convincing proof that affections somewhat dissimilar in their nature, have been classified under the same general head. Thus we find the terms Angina Spasmodica, Laryngitis, Trachetis, Angina Membranacea or Polyposa Catarrhus Suffocativa Anginea Suffocativa, all characteristic of

Croup.- Of these I have selected the last because it simply indicates a symptom that is common to all the forms of the disease -

Under the general name of Angina Suffocativa therefore I shall discuss the different species of Croup which are usually encountered in practice and with the characters of which I have been able to acquaint myself by an examination of authors.- I would not however wish to be understood as considering myself at all qualified to elucidate this intricate subject. I have chosen it on the present occasion not for the purpose of exhibiting my proficiency in medical studies, but chiefly that I might become familiar with the doctrines and modes of practice which have met with general approbation. It appears to me that the difficulty so long experienced in deciding upon the most appropriate treatment must have arisen from the circumstance that practitioners did not discriminate with sufficient care between the different species of this disease.- By administering

the same remedies for the inflammatory forms which theory had taught them to exhibit to the purely spasmodic variety, it is obvious that a complete want of success must have often attended their effects -

I will therefore endeavour to classify the various associations of symptoms and to point out the Methodus Medendi which appear to me to be particularly adapted to each of them.. As a preliminary consideration however it will be necessary to give a short history of the whole assemblage of those various affections of the larynx and trachea which have been contemplated under the general denomination of Cynanche Laryngea.. This disease was not introduced into any nosological system until the latter part of the last Century.. Professor Home of Edinburgh has received the credit of having first noticed and published a description of its symptoms.. It cannot be supposed however that no case originated before that time -

The same constitutional predisposition which now exists in children could not have been wanting and the same exciting causes which now operate must then have been influential. - It is probable that Croup was confounded with other anginose affections, and that the same want of discrimination which more recently has prevented every rational of treatment, then obscured those discrepancies which actually exist between them.

Although most of the authors who have treated of this disease appear to have believed that some degree of spasm is always complicated with its other effects, I am disposed to think that that symptom is almost exclusively confined to one particular form, and that inflammation in those cases where it it prevails is rarely attended with any other condition than those which are necessarily connected with its terminations -

Of the lining membrane also, respecting the nature and frequency of which, so much diversity of opinion

has existed, I am inclined to believe that, it is always developed by an inflammatory process and of consequence that, it, can never be expected to occur when spasm is found to predominate or when death suddenly supervenes - It is not so easy however to decide concerning either the hereditary or epidemical nature of Croup -

So many instances are frequently presented in one variety, and many individuals of the same family are so often afflicted with it, that both these circumstances have been in some measure adopted as characteristic of the same disease -

But it at least frequently happens that only sporadic cases occur in large tracts of country and that merely a single individual of a numerous family becomes affected with its symptoms - The same circumstances also obtain in all the various forms of Angina, and it may therefore be considered as quite unwarrantable to advance any absolute proposition respecting them - It is asserted by several authors that Croup prevails most

extensively in the vicinity of the sea shore and in low marshy situations - Of the correctness of this assertion I am not able to form an opinion. From what I have learned of its prevalence in this city since I have arrived here and of its appearance in various elevated inland situations according to the reports of some of my fellow students, it certainly does not appear to be confined to the sea coast or merely to low tracts of country - Probably situation does not have so much influence in producing it as vicissitudes of temperature and the deficiency of clothing with which parents are not unfrequently contented to furnish their children. -

The period of life to which this disease is commonly limited is fixed by Dr. Thomas at the point of the 7th year after birth. - Exceptions to this however occur, as to most other general rules. - According to the authority of Dr. Chapman, Gen. Washington died of Croup, and in the eloquent Lectures of the same very distinguished Professor, several other cases are alluded to - In the 11th No. of the Medico Chirurgical transactions

an interesting case of a man 36 years old is also reported by Mr. Porter of Dublin in which the operation of Tracheotomy was successfully performed – Indeed it is not surprising that such exceptions should occasionally occur, for we are not able to ascertain that adults have either lost all predisposition to this disease or been placed beyond the limits of its exciting causes –

It appears to me that Croup as it is generally considered by authors may be divided into three species. – 1st Spasmodic, 2d Catarrhal, 3d Membranous or acute inflammatory Croup which has been denominated Laryngitis –

1st Spasmodic Croup arises from exposure to currents of cold air, and various other causes of derangement in the actions of the nerves, and immediately depends upon a sudden and preternatural contraction of the muscles of the Larynx. – It is attended with great difficulty of respiration, of such a kind however as one could have no difficulty in attributing solely to a

diminution of the aperture through which air is introduced into the trachea. The sound produced by inspiration and expiration is of a whizzing kind and precisely resembles that of air forcibly blown through a narrow fissure. It has not the shrillness which accompanies Laryngitis or genuine Croup, nor is it attended with such symptoms of febrile irritation. The disease comes on much more rapidly also than either of the other forms of the disease: indeed it often invades the little patient instantly while at play or asleep. A slight notice is taken of it in Parrs Medical dictionary under the name of Asthma Spasmodica infantum. He thinks that it is a species of suffocation which may result from cold and teething, and probably it is sometimes produced by the irritation of worms in the prima viæ. Although we cannot easily comprehend how an irritating cause in the bowels or on the surface of the body can disturb the regular action of the Laryngeal nerves; still there is no reason to doubt that this disease essentially consists in a spasm of the muscles about the ligaments

of the glottis. All the symptoms are referable to this condition, and as it will be seen the remedies are successful exactly in proportion as we are governed by this opinion.- Authors however appear to consider it very difficult to discriminate between this spasmodic form of angina and those which are attended with actual inflammation.- "The inconvenience" says Dr. Parr "has been greater since from the resemblance of the symptoms, remedies have been celebrated as successful in Croup, which were never used in that disease, and the less experienced practitioners trusting to them have felt the severest disappointments.- The distinction indeed is not easy, nor does it admit of explanation".- But it appears to me that by a careful attention we can always succeed in making out the proper distinction.-

The spasmodic form comes on as I have already observed, more suddenly than the inflammatory and it is not attended with such a degree of constitutional irritation, nor does it produce so long and shrill a sound

in respiration.- It is no doubt true however as has been observed by Dr. Chapman in his very eloquent Lecture on Croup, that the spasmodic state frequently becomes converted into an inflammatory one; but then the two stages must be quite distinct, and the remedies which are calculated to allay spasm, will probably prove sufficient to avert the inflammatory state.- The treatment of spasmodic Croup may be divided into two kinds: 1st To arrest the disease when actually formed - 2d To remove those constitutional and other causes of irritation which have originally produced it.- To answer the first indication, our remedies require the utmost activity in their administration. A blister should be immediately applied to the nape or breast, and an emetic of Tart. Antimony or Ipecacuana must be given quickly in such a dose as will insure their immediate effect.- A warm bath will often prove advantageous, and the assafetida with a small quantity of Laudanum thrown up the bowels will insure the removal of the spasm, especially after

the previous operation of purgatives.. To a child of one or two years, from ℥ss. to ʒii of Assafoetida with 30 or 40 drops of Laudanum for a glyster, and this may be repeated every 5 or 6 hours according to the exigencies of the case.. To answer the 2d. indication we should attend particularly to the causes of the disease.. If it proceeds from teething, lance the gums freely; if from worms or other irritating matters in the alimentary canal, purge actively and repeatedly.. If cold has created it, order warm clothing with flannel &c.

2d. Catarrhal Croup.. the catarrhal suffocatives of some authors.. This arises from the ordinary causes of catarrh determining themselves to the mucous membrane of the Larynx, and appears to consist in an inflammatory condition of the secretory vessels of that membrane or, as some would say, of its mucous follicles.. It comes on like ordinary catarrh, with a dry hoarseness at first succeeded by a swelling and a relaxation of the mucous membrane which soon exudes a preternatural quantity of watery discharge..

By the swelling of that portion of the lining membrane which covers the ligaments of the glottis, respiration becomes impeded and in some cases totally obstructed. In consequence, a noise is produced at every expiration and inspiration which has no doubt been frequently confounded with that of genuine Croup. – But it may be easily distinguished by the dull hoarseness at first and subsequently by the rattling sound which the large quantity of mucus creates in the Larynx. – It is never attended with that sharp and shrill sound which always accompanies true Laryngitis, but is peculiarly dull and rumbling. – This affection is apt to travel down the trachea even into the ultimate ramifications of the bronchia, when it produces an engorgement of frothy mucus and speedy suffocation. –

This form of Laryngial disease should be treated with repeated emetics of Tart. Antimony followed by active doses of Calomel, and by leeches and blisters over the throat, as in other forms of Catarrh. a full dose of Opium

would no doubt check it if administered in its forming stage, and probably small doses might be employed with advantage to check the immoderate secretions of mucus in the latter stage. – The Alkalies appear to me to be admissible also in every stage as they possess great power in the same affections when seated lower down the tracheal tube: probably it was for this form that the prize offered by Buonaparte was assigned to the Hydro Sulphuret of Potash.

3.° Laryngitis or Membranous Croup, consists in acute inflammation of the cellular tissue and interstitial vessels of the Larynx which terminates in a deposition of coagulating lymph – it arises from exposure to cold and the vicissitudes of the atmosphere – It is chiefly a disease of children and is distinguished by a difficult inspiratory sounding as through a brass tube, hoarse cough with seldom any tumour in the throat – and no difficulty in swallowing. – The sound resembles the crowing of a young Cock, and is so peculiarly shrill as to afford a most infallible indication

of the disease. – A cold and a Cough more or less severe precedes for some days; then the harsh breathing comes on with some degree of constitutional irritation, which is not however always proportioned to the intensity of the inflammation. The pulse which in the earliest stage is quick and rapid, becomes very frequent and low after suffocation commences. The face, at first flushed, is in the latter stages livid and sometimes full. The stomach and bowels are not often affected. The cough is always dry; flaky substances are sometimes spit up, and the patient struggles with attempts to throw up something solid from the trachea. – The internal fauces are not often swelled or even red, nor is there frequently experienced such difficulty in deglutition as indicates inflammation of the pharynx. –

It is distinguished from the spasmodic form by not supervening so instantaneously; by being associated with some degree of fever and cough, and

by the sound being more shrill and clangous.-
It may also be distinguished from the Catarrhal by the difference in the sounds, as well as by the complete dryness of the trachea and its freedom from other Catarrhal symptoms.- The great point of distinction however appears in the latter stage of this form of Angina.- The inflammation being of the adhesive kind, coagulating lymph is not only effused into the cellular tissue of the walls of the larynx, but it is also exuded into the cavity of the respiratory tube itself, and becomes converted into a thick membrane which adheres to the mucous surface.-

This affection may very properly be divided into two stages, 1st the inflammatory, or before the vessels have relieved themselves by a secretion of coagulating lymph.- 2d The membranous; after the false membrane has been formed in the glottis and trachea, by the coagulation of the lymphs upon their walls.-

In the first stage, the most active depletive should be pursued, with the view both of subduing the inflammation and of counteracting the deposition of lymphe. - Bloodletting as the able Professor Chapman recommends, ad deliquium animi, should be practiced immediately, and if syncope cannot readily be produced, the warm bath may be resorted to as an auxiliary: at the same time We should begin to administer the Tart. Antimony in divided doses for the purpose of producing full vomiting. -

We need no other recommendation for this practice than the fact that Doctor Chapman has never failed of curing his patients by its adoption. - No doubt exists in my mind but that by timely resorting to these remedies on the first approach of the disease, the physician might always succeed. It unfortunately happens however that we are sometimes not called in to prescribe for the little sufferers till after the 2d. Stage has become developed. Then, of

course but little hope can be entertained of success. Perhaps not one instance of a recovery out of several hundred cases occurs after the croupy membrane has once been fully formed. Blisters, Emetics and Dr. Coxe's Syrup are the only remedies which can be employed to answer any useful indication. As the inflammation must have then relieved itself by the effusion of lymph, of course there will be no particular necessity for a strict antiphlogistic plan of treatment. The chief difficulty with which we have to contend is the mechanical obstruction to respiration produced by the false membrane, and the only possible way in which we can expect to succeed, will be by detaching this substance from the walls of the trachea and larynx by means of expectorant remedies, and by supporting the patient's strength sufficiently to enable him to throw up the membrane after it becomes detached. It has frequently been proposed to perform the operation of tracheotomy in this stage, for the purpose of extracting the false membrane; but I agree with Professor Chapman in

believing that but very little advantage can be gained by operating for this purpose. The membrane often extends too low down to be entirely reached and it will prove impossible to detach it, until after a successful exhibition of expectorants shall have first produced a return of the natural mucous secretions -

The operation can only be useful as a palliative to prevent immediate suffocation, while we are administering more efficacious means.- In this way Mr. Potter of Dublin succeeded with his patient; the artificial opening in the trachea only serving to maintain inspiration while he was combating the inflammation and its effects, by depletion and mercurials -